

## **APPENDIX E**

### **ESSENTIAL FISH HABITAT ASSESSMENT**

**BOGUE INLET CHANNEL RELOCATION PROJECT**

**ESSENTIAL FISH HABITAT ASSESSMENT**

**Submitted To:  
US Army Corps of Engineers  
Wilmington District**

**Prepared For  
Town of Emerald Isle, North Carolina**

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**BOGUE INLET CHANNEL RELOCATION PROJECT  
FINAL ESSENTIAL FISH HABITAT ASSESSMENT**

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## **1.0 INTRODUCTION**

The Town of Emerald Isle, North Carolina, located along the western 18 km (11.2 miles) of Bogue Banks proposes to reposition the main ebb tide channel (or bar channel) through Bogue Inlet as a means to address a severe erosion problem that is threatening development and town infrastructure located on the west end of the town in an area known as The Pointe (Figure 1.1). Historically, Bogue Inlet channel has been maintained by the U.S. Army Corps of Engineers (USACE) for commercial and recreational boating interest since 1981. The USACE is authorized to maintain the channel to a depth of 2.4 m (8 feet) mean low water (mlw) over a width of 45.7 m (150 feet). The USACE Navigation Branch has attempted to maintain the inlet channel using shallow draft U.S. Government sidecast dredges. However, this maintenance activity is limited to the deepwater channel that exists at the time maintenance is performed. As a result, the USACE Navigation Branch maintenance activities have been unable to control the location of the channel.

The proposed project design includes using a portion of the dredged material 152,911 m<sup>3</sup> (~200,000 cubic yards) to close the existing ebb channel with the balance of the material 634,810 m<sup>3</sup> (830,300 cubic yards) used to nourish the beach along the west end of Bogue Banks (Figure 1.2). The Town of Emerald Isle presently has permits to nourish 51,100 feet (9.7 miles) of ocean shoreline using material from offshore borrow areas. The Emerald Isle beach nourishment project is part of an island-wide project sponsored by Carteret County. The County project covers approximately 27 km (16.8 miles) of ocean shoreline and begins at the eastern limits of the Town of Pine Knoll Shores and extends to the west to a point 8,000 feet (1.5 miles) east of Bogue Inlet. Phase 1 of the Bogue Banks Beach Nourishment Project, completed in April 2002, included the shorelines fronting the Towns of Pine Knoll Shores and Indian Beach as well as the County owned shoreline fronting the Village of Salter Path.

## **2.0 PROJECT DESCRIPTION**

The Bogue Inlet Channel Relocation Project design proposes to relocate the channel approximately 1,082 m (3,550 feet) west of the current location to a position that is consistent with the 1976 and 1978 ebb channel locations. The channel relocation project proposes to use a cutter suction dredge to cut through an area of the swash platform to create a new main ebb channel (13.5 NGVD X 500 feet). Relocation of the inlet channel will result in the removal of 771,818 m<sup>3</sup> (1,009,500 cubic yards) of material from the design position and placed in two locations on Bogue Banks as described below. Approximately 152,911 m<sup>3</sup> (200,000 cubic yards) of the dredged material will be used to construct a wide platform sand dike in the existing channel. The creation of this sand dike will assist in redirecting the main channel flow to the new inlet location, as well as provide and re-establish intertidal habitat to the inlet. The remaining material dredged from the swash platform will be used to nourish 6,096 m (20,000 linear feet) of beach along the oceanfront shoreline of Emerald Isle.

The project will be constructed during the winter months (November 16, 2004 – March 31, 2005) when species migration and spawning is at its lowest.